

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
12 October 2000 (12.10.2000)

PCT

(10) International Publication Number  
**WO 00/59943 A3**

(51) International Patent Classification: C07K 16/18,  
C12N 5/16, 5/18, G01N 33/53, A61K 39/395

(21) International Application Number: PCT/EP00/02910

(22) International Filing Date: 31 March 2000 (31.03.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
199 15 057.5 1 April 1999 (01.04.1999) DE

(71) Applicant (for all designated States except US):  
**FORSCHUNGSZENTRUM BORSTEL** [DE/DE];  
Parkallee 1-40, D-23845 Borstel (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GERDES, Johannes** [DE/DE]; Steinfeld 79, D-23858 Feldhorst (DE). **SCHOLZEN, Thomas** [DE/DE]; Herrenweg 3, D-23843 Neritz (DE). **ENDL, Elmar** [DE/DE]; Kupferleirweg 22, D-22399 Hamburg (DE). **WOHLEBERG, Claudia** [DE/DE]; Kupferleirweg 22, D-22399 Hamburg

(DE). **BARON-LUHR, Bettina** [DE/DE]; Ehlers 13, D-23815 Westerade (DE). **HAHN, Margrit** [DE/DE]; Parkallee 40a, D-23845 Borstel (DE). **PRILLA, Patricia** [DE/DE]; Stresemannstrasse 128, D-22769 Hamburg (DE). **SZUWINSKI, Johanna** [DE/DE]; Beckertwiete 1, D-24649 Wiemersdorf (DE). **KNIPPERS, Rolf** [DE/DE]; Koberleweg 17, D-78464 Konstanz (DE).

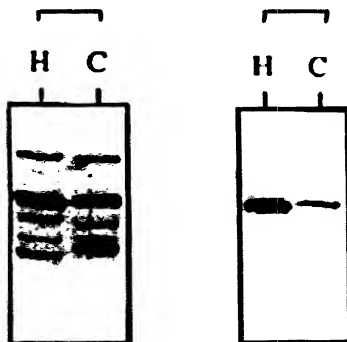
(74) Agents: **KOLB, Helga** et al.; Hoffmann . Eitle, Arabellstrasse 4, D-81925 Munich (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MONOCLONAL ANTIBODIES AGAINST HUMAN PROTEIN MCM3, PROCESS FOR THEIR PRODUCTION, AND THEIR USE



(57) Abstract: The present invention relates to monoclonal antibodies against the human MCM3 protein, hybridoma cell lines, that produce such antibodies, procedures for the production and their use, pharmaceutical compositions comprising a monoclonal antibody according to the present invention, their use for the prevention and treating of certain diseases and well of methods relating to the prevention and treatment of diseases associated with MCM3 expression. Monoclonal antibodies according to the invention detect and bind human MCM3 monospecifically both in immunohistological and immunobiochemical detection systems. The process for the production of these monoclonal antibodies comprises an initial screening of excess hybridoma supernatant with immunobiochemical methods followed by a second screening of positive hybridoma by means of an immunohistochemical method.